constructing a mold with a mold cavity for forming the denture,

depositing a first material into a portion of the mold cavity to form denture teeth;

forming a first passage in the mold, the first passage entering the mold cavity at a location spaced from the portion of the mold cavity in which first material is deposited to form denture teeth; and

injecting a second material through the first passage into the mold cavity to form a gum portion of the denture so that the mold cavity is filled with the first and second materials; and

bonding the first and second materials to form the denture.

5. The method of claim 4 wherein the first material is allowed to solidify to form a first subcomponent, a portion of the first subcomponent having the shape of exposed portions of teeth in the denture fabricated in the mold, wherein the first subcomponent is removed from the mold and trimmed to remove material that would extend beyond a gum line at an edge of the denture teeth, and wherein the first subcomponent is reinserted into the mold after trimming and before the second material is injected into the mold cavity.

6. The method of claim 4 wherein first and second passages are drilled into the mold, the second material being injected into the first passage into the mold cavity, with excess portions of the second material flowing from the mold cavity into the second passage.

7. The method of claim 6 wherein a third passage is drilled into the cavity, the second and third passages forming passages for receiving excess portions of the second material to insure that the mold cavity is filled.

8. The method of claim 7 wherein the first passage is drilled through a central section of the mold and the second and third passages are drilled through flanking sections of the mold on opposite sides of the central section so that the mold cavity is completely filled.

9. The method of claim 4 wherein the denture is trimmed along a juncture between the first passage and the mold cavity to remove the denture from the mold.

10. A mold for fabricating a denture comprising

a first mold section

a second mold section,

a denture mold cavity formed at least in part by the first and second mold sections;

a mold flask including a first flask section and a second flask section, the first mold section being positioned within the first flask section, the second mold section including a face in registration with the second flask section, wherein a first flask surface on the first flask section includes an opening through which a fluid material can be injected to solidify in the first flask section to form the first mold section.

11. The mold of claim 10 wherein the second flask section includes a second opening in a second flask surface through which a fluid material can be injected to solidify in the second flask section to form the second mold section.

12. The mold of claim 11 wherein voids in the first and second mold sections are concentrated adjacent flask surfaces through which fluid material is injected and away from the denture mold cavity so that the mold cavity is defined by relatively smoother surface contours.

13. The mold of claim 10 wherein the first mold section comprises an exterior side mold section and the second mold section comprises a tissue side mold section having a contour conforming to a tissue side of a denture to be fabricated in the mold cavity.

14. The mold of claim 10 wherein the first flask section comprises a base and the second flask section comprises a cover attachable to the base, the volume of the base being sufficient to house the first and second mold sections and the denture mold cavity.

15. A method of duplicating a denture comprising the steps of:

pressing a deformable material into contiguous relationship with the tissue side of a denture so that the deformable material substantially covers the tissue side;

positioning a flask lid on an exterior surface of the deformable material so that the deformable material is positioned between the denture and the flask lid;

mounting the flask lid, with the deformable material and the denture affixed thereto on a flask base;

introducing a curable material into the flask base so that the curable material fills open portions of the flask and forms an impression of the remaining portions of the denture including teeth, lingual flange, and other exposed gum portions of the denture;

curing the curable material to form a solid mold base.

removing the deformable material from the tissue side of the denture;

introducing a curable material into the volume vacated by the deformable material and curing the curable material to form a tissue side denture mold, matable with the mold base;

removing the denture leaving a mold cavity formed between the tissue side denture mold and the solid mold base;

forming a duplicate denture by filling the mold cavity with material suitable for forming a denture.

16. A method of duplicating a denture comprising the steps of:

fabricating a tissue side mold;

fabricating an exterior side mold, with a parting surface between the tissue side mold and the exterior side mold being located to substantially include an edge separating a denture tissue side from a denture exterior side, the tissue side mold and the exterior side mold forming a mold cavity; and

introducing materials suitable for forming a duplicate denture into the mold cavity.

17. The method of claim 16 wherein the exterior side mold is fabricated by introducing a curable material into a denture flask base, after positioning the denture in the denture flask base with the denture tissue side being covered to block the curable material.

18. The method of claim 17 wherein the tissue side mold blocks the curable material from being deposited on the denture tissue side.

19. The method of claim 17 wherein a temporary filler material blocks the curable material from being deposited on the denture tissue side, the filler material subsequently being removed for formation of the tissue side mold.

20. The method of claim 16 wherein the tissue side mold is fabricated before fabrication of the exterior side mold.

21. The method of claim 16 wherein the exterior side mold is fabricated before fabrication of the exterior side mold

22 A mold for fabricating a duplicate for an original denture, the mold including

a flask,

a first flexible mold section,

a second flexible mold section located within the flask, the first and second flexible mold sections forming at least part of a denture mold cavity in which the duplicate of the original denture is molded;

wherein, the first and second flexible mold sections include sloping surfaces extending away from the mold cavity, the sloping surfaces comprising means for aligning the first and second flexible mold sections to form the denture mold cavity.

23. The mold of claim 22 including a flask in which the first and second mold sections are positioned.

24. The mold of claim 23 wherein the second mold section comprises a mold base located in a flask base, the first mold section being removable from the flask to expose the mold cavity.

25. The mold of claim 22 wherein the first mold section comprises a tissue side mold section and the second mold section comprises an exterior side mold section forming the exterior contour of denture teeth and the denture gum section.

26. The mold of claim 22 wherein the first and second sloping surfaces comprise means for laterally aligning the first and second flexible mold sections without subjecting the first and second mold sections to loads which deform the mold cavity.

27. A method of fabricating a mold for use in forming a duplicate denture comprising the steps of forming a first mold portion and a second mold portion, the first and second mold portions forming at least parts of a mold cavity in which the duplicate denture can be formed, the method being characterized in that at least one of the mold portions is formed by pouring a fluid material through an exterior surface of a mold flask and allowing the fluid material to solidify to form the latter mold portion, the mold flask being position such that air bubbles in the latter mold portion, when solidified, are formed at locations spaced from the mold cavity.

Respectfully Submitted

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